

Remarks:

Reconsideration is respectfully requested of the rejection of claims 1, 2, 10, 11, 17 and 22 as being anticipated under §102(b) by Japanese reference 58-174078. The '078 disclosure is of a method for converting a single hull vessel to a double hull wherein a cutout is made in an upper deck and the cutout is then dropped down to form an elevated lower floor and thus a double bottom. The longitudinal bulkheads are first cut longitudinally into two portions, with the lower portion being left in place to support the top deck cutout, and the upper portion is relocated, presumably by first cutting them free all along their top seam where they are joined to the top deck and then relocating them laterally outboard to increase the transverse spacing therebetween before re-joining them to the top deck. The cutout is then mounted atop the lower portions and joined to the re-located upper portions with "slanted bulkheads" to thereby form the inner hull. The touted advantage of this method, as stated in the English translation excerpt provided by the PTO, is to reduce the amount of steel materials and number of working steps to convert a single hull vessel to double hull construction.

The independent claims in this rejection all have been amended to emphasize that the present invention achieves a conversion from a single hull to a double hull in a smaller number of steps, and by not cutting or relocating portions of the longitudinal bulkheads. Relocating the longitudinal bulkheads is not a simple task in that the bulkheads are first cut into two "residual parts", the top residual part must be cut free from the bottom of the top deck, presumably along a welded seam joiner, the top residual parts must then be moved and held in place to be re-joined to the top deck in laterally spaced apart locations. That further requires that a new surface be

prepared for the weld, and that the rather large and lengthy top residual part be positioned while the weldment is achieved. All this below decks in the hold of the vessel. And, the reconstruction is substantial enough to challenge the integrity of the vessel should any mistake be made in re-joining the longitudinal bulkheads. With the present invention virtually all of this reconstruction, and risk to the integrity of the vessel, is avoided. For these reasons, the rejection should be withdrawn.

Reconsideration is respectfully requested of the rejection of claims 1, 2, 10, 11, 12, 17, 18, and 22 as being anticipated under §102(b) by Japanese reference 53-40995. The '995 reference is different from the '078 reference in that the '095 reference discloses a method for converting an existing double hull vessel previously used with oil but desired to be used with mineral, grain, and general freight. As best understood, Fig. 1 and 2 depict the vessel before conversion while Fig. 3 and 4 depict it after conversion. For comparison purposes, the corresponding cross-sectional views of Fig. 2 and 4 best depict the before and after configuration of the conversion. As shown therein, the vessel in Fig. 2 has a double bottom hull, but the profile of the inner hull is not flat and instead is formed in the shape of two adjacent semicircles. This inner hull profile is changed to the flat profile shown in Fig. 4 by cutting out portions of the top deck and then mounting them below decks atop a different floor support bracket arrangement in place of the bracket arrangement shown in Fig. 2. This different bracket arrangement is comprised of a plurality of similarly sized cross brackets as opposed to the differently sized I-beam brackets shown in Fig. 2. The result is a flat inner hull bottom as might be more suitable for the indicated different kinds of cargo such as grain, etc. Thus, the reference does not show or teach conversion of a single hull vessel into a double hull vessel and is not confronted with or

present solutions to the likely problems presented with that kind of vessel conversion. In any case, it is respectfully submitted that none of the drawing figures depict a single hull vessel. For these reasons, the rejection should be withdrawn.

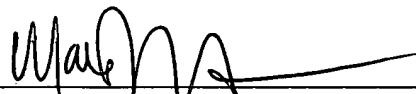
Reconsideration is respectfully requested of the rejection of claims 3, 4, 5, 6, 13, 14, 19-21, 23, and 24 as being obvious under §103 over Japan '995 in view of Hagner US Pat. No. 6,708,636. The '995 reference has been discussed above and fails to disclose a vessel converted from single hull to double hull. Therefore, this rejection must fail at the outset as adding the teaching of Hagner fails to fill in the shortcomings of '995. The rejection should fail for another perhaps more important reason in that there would be no motivation to combine the teachings of Hagner's stiffened panel inner hull with either the '995 or the '078 references, for several reasons. First of all, each of these Japanese references teach a technique of cutting out a portion of the top deck and then re-using it as a replacement ('996) or new ('078) inner hull. Therefore, each of these references have solved any supposed problem in "handling one big plate" that the Office Action suggests would cause one of ordinary skill in the art to throw away the top deck cutout. Indeed each of these references makes accommodations in other aspects of their conversion in order to re-use the cutout. For example, each teaches the use of "slanted bulkheads" to join the cutout to the longitudinal bulkheads, which would presumably not be required should Hagner's stiffened panels not be used. Secondly, each of these references suggests concern with cost and reducing the amount of steel materials needed to achieve their respective vessel conversions. Should one want to use the stiffened panels of Hagner, one of ordinary skill in the art would realize that the cutout now becomes useless, or wasted steel. That's because the stiffened panels are taught as being made up off site, such as by being

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“prefabricated on a jig in a shop that allows for a faster, better fit-up and weld procedure than could be accomplished in place”. See Hagner, col. 11, lines 47 et seq. Surely one of ordinary skill would realize that it would be time consuming, expensive, and foolhardy to even consider taking the cutouts away to a shop, cutting them up, and then using them as the stiffened panels to form the inner hull. Thus, one of ordinary skill in the art would not be motivated to combine the use of Hagner stiffened panels into the method of either reference. For all these reasons, the rejection should be withdrawn.

For these same reasons, the remaining §103 rejections of claims 7-9; and claims 12, 15, and 16 are obviated and should be withdrawn and a speedy allowance is respectfully requested. Should the Examiner have any questions regarding the amendment or any further matters prior to allowing the application, he is respectfully requested to telephone Applicant’s undersigned representative to expedite issuance hereof.

Respectfully submitted,



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